Suburban retrofitting - a useful strategy for Swedish urban planners?

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Foreword

This work is a master’s thesis written during the spring term 2013. I’m a student at the Royal Institute of Technology, KTH, in Stockholm, where I am studying urban and regional planning. Most of the thesis was conducted while being on an exchange year in Slovenia, at the Faculty of Architecture, University of Ljubljana. The course in which I’m writing this master’s thesis is called ”Degree Project in Regional Planning”, coordinated by Peter Brokking from the School of Architecture and the Built Environment. The course aims to give the student knowledge about planning on local, national and international level – putting an emphasis on theories and methods connected to development and evaluation of urban settlements in a regional context. I think that I have gained that particular knowledge through working with this thesis. For example, I have studied theory about urban development that is particular for one part of the world, and applied it in another. Overall, working with the thesis has been a very interesting and rewarding experience, and I have received great help and guidance from my supervisors: Petra Čeferin from University of Ljubljana and Helen Runting from KTH, which I would like to thank.

Christoffer Jusélius

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Abstract in English

There is an on-going generational shift related to car culture, occurring in the developed world. After decades of increased driving, a decline can now be seen in twenty of the developed countries. Moreover, one out of five regional shopping malls in America is either dead or likely to fail within the next five years. This has given rise to a new urban planning strategy called “suburban retrofitting”. The strategy mainly concerns redevelopment of suburban areas; involving densification of the area’s built environment, a diversification of functions and improved public transportation to the area. The most common mode of public transportation used within suburban retrofitting is light rail. Most suburban retrofitting projects to date have been carried out on sites of dead shopping malls, and the literature focused on suburban retrofitting is, so far, mainly focused on American conditions.

Thus the purpose of the thesis is to relate the theories about suburban retrofitting to the Swedish urban planning context, to see if these theories are useful and relevant for Swedish urban planners and policymakers. This question is highly dependent on whether these strategies can be considered to contribute to sustainable development. A case study is carried out about the redevelopment of a commercial area called Kungens Kurva, in Huddinge, south of Stockholm. The area will be denser, take on a city like character and be supplied with public transport. However, some important aspects of this project differ from the theories about suburban retrofitting: no housing is planned, substantial space for parking remains and shopping will still be the dominant activity in the area.

The preconditions for suburban retrofitting differs greatly between Sweden and the U.S. Thus, the subjects for suburban retrofitting in Sweden might currently rather be the “million program” suburbs than commercial areas at the urban fringe. One of the reasons for this is that, in Sweden, commercial areas at the urban fringe are often still doing economically well. Which means that the preconditions for fundamentally changing the character of these areas – by introducing housing and diversifying the functions in the area – simply is not good enough. Other factors that make a radical transformation of commercial areas difficult are the strong regulations concerning noise and pollution. It is particularly the regulations concerning housing that make suburban retrofitting projects adjacent to highways problematic in Sweden. As for introducing a light rail system to the area, it is only a rational choice for the Swedish cities that already has such a system. The subway system has proven to be far more effective in diverting car trips to locations at the urban fringe. Therefore it might be a better choice for suburban retrofitting projects in Stockholm.
Abstract in Swedish

Det pågår för närvarande ett generationsskifte vad gäller bilkulturen, både i Sverige och i hela den industrialiserade världen. Efter decennier av ökande bilkörning kan man nu se en nedgång i tjugo av de utvecklade länderna. Dessutom har ett av fem externhandelsområden i USA redan lagts ned, eller är sannolikt att bli nedlagt inom de närmaste fem åren. Detta har gett upphov till en ny strategi inom stadsplanering som kallas för ”Suburban retrofitting”, eller ”förtortsomvandling”. Strategin syftar till att omvandla förortsmiljöer och innebär förätning av den byggda miljön, en diversifiering av områdets funktioner och förbättrad kollektivtrafik till området. I förortsomvandlingsprojekt är den vanligaste typen av kollektivtrafik spårvägssystem. De flesta genomförda förortsomvandlingsprojekt har avsett nedlagda köpcentrum och den litteratur som berör ämnet är i huvudsak fokuserad på Amerikanska förhållanden.


1. Introduction

To begin with, the main subject of this thesis is “suburban retrofitting”. A term mainly found in U.S. urban planning literature that has become well established during the last decade. It basically means redeveloping mono-functional, sprawled suburban areas into multi-functional, dense city districts. However, before we go into detail about suburban retrofitting, it is necessary to give a thorough background; discussing the contributing factors that led to this phenomena. The main factors could be described as a steady decline of driving in the developed world, declining shopping malls and new values and preferences among younger generations. In Europe the situation is slightly different, as shopping malls at the urban periphery are still expanding. Moreover, the public transport infrastructure is generally better than in the U.S. These factors and geographical differences will be deliberated in the background, i.e. part 1.1. Thereafter, this study’s purpose and research questions are presented in part 1.2. Involving questions such as whether Sweden planners and policymakers should embrace the concept of suburban retrofitting; when suburban retrofitting should be considered sustainable; and whether to synchronise the current revival of light rail in Europe with suburban retrofitting projects. Finally, the limitations of the study as well as the structure and disposition of it, is described in part 1.3-1.4.

1.1 Background

During the last decade, a few very interesting developments are starting to show. It appears as if the automobile is slowly losing its grip of urban development that has been so firm since WW2. Interestingly enough, this is particularly obvious in the U.S; a country known for its strong car-culture. Also the shopping mall, an important part of U.S. car-culture, has seemingly come to a halt, and is now in decline. In the light of these developments, some would argue that the whole American dream is being redefined; opening up to vast opportunities for urban planning; others reject this idea, claiming what we see are merely the results of the recent recession. As sites of dead shopping malls in the U.S. are being redeveloped at a rapid pace, Swedish planners and policymakers need to ask themselves whether to adopt this strategy as well. This thesis aims to find answers to these questions by relating American urban planning literature about suburban retrofitting to the Swedish planning context. However, before that can be done, we need to thoroughly assess the causes behind the mentioned developments.

1.1.1 The decline of the automobile

As we speak, many things point to the fact that we are seeing an on-going generational shift related to automobile transportation in the developed world. In fact, after decades of steady increase in driving, a decline can now be seen in twenty of the developed countries. This decline is diagrammatically illustrated in figure 1 below. In addition to this, the number of sold cars in Europe has decreased from 15 million in 2007 to 11.8 million in 2008. Some explanations are: higher gas prices, new licensing laws, better public transport and changes in attitudes. It certainly seems as if, especially for younger generations, the automobile has lost some of its appeal (Ljungberg, 2013).
In the developed countries, young people are ceasing to consider the car a status symbol – instead, for many it’s merely considered a tool for transportation. Other changes in attitudes include an increased awareness of environmental issues and a trend of more shared consumption. The changes in values have led to a situation where city centres, particularly in the U.S, are becoming increasingly more attractive to invest in. The city centres of Chicago and Portland stands as examples of this development, as the share of building permits in the central city districts have increased considerably (Davis & Dutzik, 2012, p. 12).

A valid question is whether the trend of younger generations driving less will persist. According to Davis & Dutzik’s analysis in their work “Transportation and the new generation” – the temporary factors that have contributed to the decline in driving are fewer than the long lasting ones.

“While temporary factors such as the recession have contributed to the decline in driving, the shift in transportation attitudes and behaviours among young people appears likely to persist as they get older and as new people reach driving age. Social networking sites, smart phones and other new communications innovations not only provide an alternative to driving in their own right but they also provide a platform for transportation services such as real time transit information and car- and bike-sharing services that did not decade a decade or two ago” (Davis & Dutzik, 2012, p. 9).

The decline in driving seems highly interrelated with another declining phenomena, namely the U.S. shopping mall. In the U.S., commercial areas at the urban periphery – once a symbol for wealth and progress – are, as we speak, dying faster than they are being built. Today many of them are in heavy decline, spreading blight and decay; however, simultaneously opening up for new urban forms to be built in their place.

1.1.2 The decline of the U.S. shopping mall
With the introduction of the car, driving to a particular destination for the sake of consumption became an important part of American culture; making retail establishments out of town plausible; and resulting in enormous parking lots adjacent to these. Between the 1960’s and the 1980’s, an unthought-of expansion of shopping malls could be seen in the U.S. Developers started to systematically build shopping malls, buying cheap suburban, agricultural or natural land; turning it into large-scale commercial agglomerations. The density of shopping malls became a direct consequence of the level of income in a specific area, and with increasingly advanced surveys and predictions, investing in regional shopping malls became an incredibly profitable and safe investment. In fact, less than one percent of the malls built between 1960 and 1985 failed. Which led major construction contractor “Debartolo” to state that shopping malls is “the best investment known to man” (Sorkin, 1992, p. 7; de Châtel & Hunt, 2004, pp. 57-58). Nonetheless,
this boom could not go on forever and eventually the American market became saturated; drastically decreasing the profitability and expansion of shopping malls.

A study carried out by Pricewater-houseCoopers in 2001 reports that one out of five regional malls in America is either already dead or likely to fail within the next five years. Moreover, the study shows that smaller malls are more likely to fail than bigger ones – leading to a situation where “megamalls” located far out in the periphery survives – but also generating opportunities to redevelop the sites of smaller malls. To further illustrate this development, The International Council of Shopping Centres, ICSC, estimated in 2007 that in the U.S. alone, about 1000 malls have gone out of business. Together amounting to vast areas of underused land and general blight (Dunham-Jones & Williamson, 2011, p. 114 & 116).

The question, of course, is why all of these once thriving shopping malls cannot survive under current conditions. Dunham-Jones and Williamson argue that the answer is found in the overabundance of retail space located in the suburbs. In the U.S., retail space per person increased with 25 % between 1986 and 2005; resulting in 1.87 retail square metres per person, a number six times higher than in Sweden – which has the highest retail space per person in Europe. This redundancy of retail space, together with a growing number of online retailers, have led to a fierce competition; consequently putting uncompetitive shopping malls out of business. (Dunham-Jones & Williamson, 2011, p. 116 & 117)

Nevertheless, for the big retailers, the mentioned decline hardly comes as a surprise. Considering that for a typical U.S. commercial strip, the life expectancy of its retail establishments is around 15 years. After that, the big retail companies already have planned to move to a farther, and cheaper location. Thus these areas are often subject to overdevelopment and inefficient land-use. As malls and other large retail functions have strong influence on their surroundings, declining shopping malls can be very damaging for nearby businesses, making them particularly suitable for urban redevelopment; something we will return to later on (Tachieva, 2010, p. 129 & 151).

### 1.1.3 Suburbia is changing

The decline of the automobile and the shopping mall are obviously related, but also part of a much bigger development. Suburbia is experiencing a fundamental transformation. While the description of suburbia as low-density residential areas mainly inhabited by the affluent, white, middle-class, might have been true 20 years ago; today, the demographics and economics of U.S. suburbia is highly diverse. In reality, nowadays singles, childless households, elderly people and new immigrants make up a substantial part of the suburban populace. Further, as suburbia now is housing a different population, other values and preferences will increasingly start influencing its character – and with good reason. Urban designer Galina Tachieva points out the dangers related to the lack of social life in suburbia:

> Studies have shown that sprawl is damaging to both physical and social health, isolating people in car dominated environments where they are deprived not only of the physiological benefits of walking, but also of the natural human interactions typical of complete communities (Tachieva, 2010, p. 3).

As opposed to being isolated in suburban reserves; urbanity, proximity, walkability and public transit are what the new suburban population desires. In fact, the generation born between 1979 and 1996 (children of baby boomers) have radically different preferences than their parents.
According to recent marketing research, 77% of them state that they prefer to live in an urban core – and that even if they have children – they prefer living in central locations (Dunham-Jones & Williamson, 2011, p. 19). This shift in preferences and values among suburbia’s new population, together with large and dying retail areas at the urban fringe, and an increasing awareness of environmental issues; it seems inevitable that the physical character of suburbia need to be adjusted. How will the elderly transport themselves around in the car-dependent suburbs when they can no longer drive? How will younger generations – unwilling to drive but willing to live in dense urban areas – have sufficient dwelling options? And while the suburban landscapes account for the highest carbon dioxide per capita emissions, are characterized by short term urban planning and encourage wasteful lifestyles; how can we modernize suburbia while taking environmental issues into account?

Some ideas are presented in the recent American planning literature. Authors like Ellen Dunham-Jones & June Williamson and Galina Tachieva talk about “Suburban retrofitting” and “Sprawl repair”; two similar concepts that rapidly are gaining popularity and influencing current urban planning policies and suburban redevelopment projects in the U.S. In fact, the regulatory climate in suburbia is changing. Zone-based regulations that historically have led to the fragmented and mono-functional areas associated with suburbia are in many places being revised: over 80 cities have adopted, or are in the process of adopting, “SmartCode”. That is, a form based ordinance that makes mixed-use developments possible. At the same type, more and more projects intending to change suburban places into urban ones are being realized in the U.S. Typically, dying shopping malls are turned into multi-functional, dense and public transit oriented city districts. It is important to note that this phenomena is still in its infancy. Urban sprawl will, for some time, continue to be considerably easier to build, finance and regulate (Tachieva, 2010, p. 3 & 15). With this in mind, it’s interesting to relate this phenomena to the Swedish context. As we will see, some important parameters concerning urban planning at the urban fringes differ from the U.S.

1.1.4 Sweden, car-culture and the million program suburbs

Since the Second World War, the car-culture in Sweden has steadily grown stronger. The war had put the consumption of cars on hold, and between 1945 and 1946, the amount of cars in Sweden leaped from 50 000 to 140 000. Volvo became a symbol for the incredible economic development in Sweden during the 1950s. Then came another car manufacturer, Saab, and subsequently the car industry became Sweden’s most important product for export. Alike the U.S., the car had become a self-evident part of Swedish life (Borneskans, 2007). As a result, the infrastructure for cars was built at a rapid pace; in fact, the vast road infrastructure in Sweden is, counted per capita, the biggest in the world (Ljungberg, 2013). The development towards increasingly car-oriented cities in Sweden has been largely unthreatened since the 1950s, but recently something has happened. More cars are still being produced, however, since 2008, the total amount of kilometers driven per year is decreasing (see figure 2 below). In fact, between 2011 and 2012, the amount of kilometers driven decreased by 2% (Myhr, 2013).
Along with the car-culture came the out-of-town shopping and big box commercial areas. By locating large-scale shops in cheap locations, shop owners can rationalize their businesses and lower costs. Municipalities in Sweden have been positive to large-scale commercial areas at the urban fringe, and so the increase of these establishments have been explosive (Elvingson, 2001, p. 4).

It is important to note that when urban sprawl increased in Sweden, it wasn’t just villa suburbs that were built. After the Second World War, the housing standard in Sweden was still very poor. Which meant that a lot of decaying houses needed to be torn down. The combination of a rapidly emergent economy – in particular a growing export industry – and a strong urbanization created a substantial lack of housing. The situation escalated in the 1960s and the Swedish politicians decided that the public housing companies should provide the sufficient amount of homes. Thus, they started a project called the “million program”, which aimed at constructing a million homes in ten years (1965-1975) – and succeeded in doing so. Most of the million homes were built in the suburbs and strongly influenced by le Corbusier’s planning ideals; strictly planned areas where pedestrians are separated from cars; containing large-scale housing complexes. These suburbs were meant to be almost self-sufficient, offering housing, work and services. However, nowadays many of these areas are often referred to as bad living environments because they are home to low income groups, extremely segregated and has an ill-maintained housing stock (Hedman, 2008, pp. 16-17).

Ever since the beginning of the million program, municipalities within Sweden have had a strong independence when it comes to planning, and thus it is almost entirely up to them whether to allow new development. Retail developers and construction companies have had great success in making Swedish municipalities plan for new, large-scale, commercial areas outside of town – often by playing municipalities against each other. Often, a municipality think it will add to their image as a growing, progressive municipality; and that it will lead to new jobs and better prices. Nonetheless, criticism have been raised within Sweden, addressing the social and environmental problems that the mentioned development have led to. As large-scale commercial developments need vast amounts of space, they are often localized on agricultural land – increasing the dependence on imported food. The competition from big box stores in the urban outskirts have impacted hard on centrally and semi-centrally located stores; in particular stores within suburban centers, which might worsen already socially problematic areas. Moreover, as retail facilities at the

![Figure 2. Graph of vehicle kilometers driven in Sweden from 1999 to 2012 (Myhr, 2013).](image-url)
periphery become more important, it becomes increasingly difficult for certain social groups, which for various reasons do not possess a car, to meet their daily needs. This is illustrated by a study which shows that 29% of the households that previously were doing their groceries in centrally located stores, had switched to the larger stores, out of town, after they had been established. Consequently, the need of driving increased by 3-11 times and the yearly carbon emissions increased with 120 to 370 kilo per household. (Rämme & Rosén, 2009, p. 38; Elvingson, 2001, pp. 3-8).

Due to these negative externalities, it is hardly surprising that many countries have chosen to strengthen their regulations concerning retail areas at the urban fringe. All of Sweden’s neighboring countries have taken measures to improve regulation against big retail establishments outside of the cities. But even with stronger regulations, most Swedish commercial areas at the periphery are still doing economically well. Which means that if planners and politicians want to redevelop these areas according to the principles of suburban retrofitting, it will have to be a proactive endeavor – and just like the case study (chapter 4) in this thesis illustrates – that means a less radical approach (Elvingson, 2001, p. 3). However, the public transportation infrastructure in Sweden is more extensive than in the U.S, and several far-reaching projects are currently in the making; which often is the main facilitator for suburban retrofitting. Many of them concerns light rail systems, a mode of transport most commonly defined as “a public transport system permanently guided at least by one rail, operated in urban, suburban and regional environment with self-propelled vehicles and operated segregated or not segregated from general road and pedestrian traffic” (Errac, 2009, p. 9 & 18). One of these projects is called “Spårväg syd”; a light rail system that will operate south of Stockholm; from which two stations will be relevant to the retail area called “Kungens Kurva; which is the subject of the subsequent case study.

In conclusion, there are factors that speak for suburban retrofitting in Sweden; and those that don’t. Commercial areas at the fringes are still doing fairly well, thus still expanding and proclaiming vast areas of land. However, at the same time, driving is decreasing in Sweden and public transportation does seem to see somewhat of a renaissance (Infrastrukturnyheter, 2011). Especially light rail systems which are the most commonly used systems in suburban retrofitting projects. Moreover, many argue that the million program suburbs need to be redeveloped and these areas might be suitable subjects to suburban retrofitting strategies; the areas are located far out in the urban periphery; and local businesses struggle to survive due to competition with large scale commercial areas (Livh & Lindblom, 2010).

With these contradicting conditions in mind, the main aim of this thesis is to relate the suburban retrofitting concept to the Swedish urban planning context. Which in practice means applying the theories found in American planning literature about suburban retrofitting to Swedish conditions. The intention is to contribute to the Swedish theory base about suburban retrofitting; which today leaves a lot to be desired. Subsequently, the particular research questions and the purpose of this thesis will be further illuminated.

1.2 Purpose and research questions
Due to the recent decline of commercial areas at the periphery in the U.S; together with an increased popularity of redeveloping these areas into city districts – i.e. “suburban retrofitting” – new planning literature to deal with this topic is forming a theory basis. However, so far, the
literature is focused on the American context, and consequently American examples. Some trends behind suburban retrofitting can be seen both in the U.S. and in Sweden, such as a steady decline in driving and increasing fuel prices. Moreover, light rail systems are gaining popularity in both countries, and this mode of transit is particularly prevalent in suburban retrofitting projects. Thus, by applying the mainly American theory about suburban retrofitting to the Swedish planning context, it might become clear whether these urban development strategies are relevant and useful for Swedish planners.

Sweden, with the highest rate of retail space per inhabitant in Europe, might be one of the first countries in Europe to see suburban retrofitting projects. Thus, a case study will be carried out; where the theories and design proposals found in literature about suburban retrofitting, will be applied to a sizeable commercial area south of Stockholm. Lastly, the desirability of suburban retrofitting in Sweden might be dependent on whether such projects can be considered compatible with sustainable development or not. Altogether these notions have formed the following research questions:

- In the light of the diminishing appeal of the car-culture, together with demographic changes, increasing environmental awareness, and high fuel prices; should Swedish policy makers embrace the concept of suburban retrofitting, and apply it both proactively and reactively?
- What would be the outcome of applying theory – found in American planning literature – to a relevant case; that is, a Swedish commercial area located at the urban periphery? This includes questions such as whether the physical conditions are suitable for suburban retrofitting and whether planners, policymakers and retailers consider it desirable.
- Some of the existing suburban retrofitting projects are fairly similar to conventional suburban developments; thus, questionable regarding sustainability. When should suburban retrofitting efforts be considered a form of sustainable development, in terms of economic, environmental and social sustainability?
- Is the rational approach for Swedish planners, policymakers and developers to synchronise and integrate the on-going trend of building light rail systems with suburban retrofitting efforts?

1.3 Limitations

As with any study, there are certain limitations related to this work. Perhaps the most significant one is the limited amount of cases; due to time restrictions. Comparing the U.S. phenomena of suburban retrofitting, and the related theory, with only one Swedish case, might not be sufficient to make an in-depth comparison. However, the case chosen, “Kungens Kurva” outside Stockholm, might be the most relevant Swedish case; considering that it is the biggest retail area in northern Europe, and that it is the subject of a redevelopment project very similar to the existing suburban retrofitting projects in the U.S. Since the study is of an exploratory and qualitative nature (as discussed in chapter 2), one might also argue that the point is to find patterns and relations that is useful for conducting further research, rather than trying to give a complete picture of all the suburban retrofitting examples in Sweden. Another limitation is that barely no Swedish planning literature that deals with suburban retrofitting exists. Without a sufficient theory base to relate the findings to there is a risk of bias, or a lack of nuances, to the
conclusions that follow this work. Thus it is questionable whether any definitive answers can be given to the research questions.

1.4 Disposition
This thesis work is divided into chapters and subchapters; starting with chapter 2, “methodology“, which includes the approach of the research and how the literature review, interviews and case study will be conducted. The literature review can be found in the next chapter; deliberating the suburban retrofitting phenomenon, transportation in urban planning and sustainable development. In chapter 4, the case of the study, which is a redevelopment project of a Swedish retail area, is compared with its equivalents in the U.S (suburban retrofitting projects). Several aspects of the project differ from the principles of suburban retrofitting, and are therefore analysed and discussed. Lastly, sustainability aspects of the case will be deliberated. Chapter 5 is the last chapter of the study and involves two parts, a final discussion and the conclusions of the study.

2.0 Methodology
To successfully carry out a research project alike this master’s thesis, the first thing one needs to consider is the “research approach”. Which inevitably is dependent on, and adapted to, the study’s specific research questions and problems. The motives and considerations for choosing the research approach for this thesis, namely a qualitative one, is described in part 2.1. Moreover, naturally many techniques and tools are available for conducting research. In this work, as described in part 2.2, a comprehensive literature review will be carried out. Ranging from the decline in driving and increase of light rail systems, to the decay of commercial areas in the U.S. and the phenomena of suburban retrofitting. This theoretical basis is later complemented with face-to-face interviews and e-mail interviews with relevant actors, along with a case study, all deliberated in part 2.2 and 2.3. The results from the literature study, the interviews and case studies will later be analysed using “critical analysis”; a method described in the last part of this chapter, 2.4.

2.1 Research approach
This master’s thesis aims to explore the theory about suburban retrofitting, found in American planning literature; and to apply this theory to the Swedish planning context; with the intent to answer research questions such as whether suburban retrofitting is a form of sustainable development and if Swedish decision makers should embrace this concept. Since Swedish planning literature do not provide a sufficient theory base regarding the phenomena, the existing literature will be applied to a Swedish example; and the results from this experiment might shed some light on the presented research questions.

With that in mind, it appears suitable to have a qualitative research approach, as that means going about the issues in an exploratory way; using case studies, reviewing the related literature and interviewing the relevant actors. Further, exploratory research means collecting information in a re iterative process, continuously developing theory and research questions until solid conclusions can be drawn. The aim of the study is to find patterns, relations and ideas that can be useful in understanding and conducting further research of the issues at hand. Having a qualitative
approach, as opposed to a quantitative, involves more interpretation; taking values, attitudes and perceptions into consideration (Walliman, 2011, p. 128; Neville, 2007, pp. 7-8; Creswell, 2003, pp. 83-84).

As a result of the purpose of this thesis, namely to apply the theories of suburban retrofitting to the Swedish context; there will be questions about the future for Swedish commercial areas at the urban periphery. Consequently, it will be necessary to conduct a certain amount of predictive research. Which means speculating about the future by looking at previous research describing cause and effect. (Neville, 2007, p. 7).

One needs to acknowledge that the results of predictive research are completely dependent on the choice of variables and use of data. Consequently, the conclusions drawn can easily be made obsolete if the variables chosen are of volatile nature. As for the next part, considering previous research about the subject is a precondition for drawing any conclusions concerning the future, we now turn to the choice of literature used in this work, i.e., the literature review.

2.2 Literature review
The purpose of the literature review is to identify the results of other studies that can be used in this work. It also puts my work in the context of other studies and relates it to the comprehensive dialogue about the issues involved; that is, the decline in driving, light rail systems, commercial areas at the periphery, suburban retrofitting and sustainability. Because I have a qualitative approach, conducting an exploratory research study, I aim to let the findings in the relevant literature shape my standpoints and research questions, and not vice versa (Creswell, 2003, pp. 32-33). The literature review will be necessary to support further reasoning and conclusions about the research questions.

In addition to finding the information necessary for the study, doing a literature review also means evaluating the relevance and quality of findings and ideas within the literature. Only by having a critical view on the literature within the review, it is possible to value the quality of the research evidence found in the literature (Walliman, 2011, pp. 58-59). Researcher and senior lecturer at Oxford Brookes University, Nicholas Walliman, claims that the literature review, apart from showing where ideas derive from, also reveals a lot about the researcher:

The review can be used to show where you have gained inspiration to develop your ideas – and that does not just have to be only from academic sources. It should also demonstrate that you have a good understanding of the current conceptual frameworks in your subject, and that you can take a stance in placing your work within these. The literature review tends to reveal a lot about the attitude of the researcher and the seriousness of his/her intentions, as well as the level of organization and clarity of thought achieved. (Walliman, 2011, p. 57)

Apart from uncovering the standpoints and the attitude of the researcher, Walliman argues that the literature review shows the researcher’s understanding of the relevant conceptual framework. Thus, a nuanced and comprehensive literature review, is crucial for the work to be perceived as serious and relevant in the research context at hand. However, merely theoretical findings are rarely enough to reach interesting or useful conclusions about the research questions. Therefore, findings from literature will be complemented with findings from interviews and case studies; two methods described in the subsequent parts.
2.2 Interviews

In order to investigate the research questions of this work, interviewing key actors is the preferred method for gathering data of qualitative nature. By conducting interviews, the views, experiences and motivations of the interviewees can be illuminated; all crucial information for an in-depth analysis of the subject at hand. Moreover, using interviews is suitable in exploring topics that might be controversial. Or simply when little or no previous research of the subject has been made (Gill, 2008, p. 292). As opposed to questionnaires, interviews are significantly more flexible concerning how the given questions can be answered, and how answers immediately can be followed up; making it easy for researchers to thoroughly probe certain issues. Interviews are commonly categorised into three different formats, namely; “structured interviews”, meaning standardized questions following an interview schedule-e; “unstructured interviews”, allowing flexibility and potentially letting the interviewee steer the interview; and semi-structured interviews, containing both standardized and open questions (Walliman, 2011, p. 99).

Within this study, the interviews will be semi-structured, containing certain key questions and at the same time having an open format, so that, if needed, the discussion can deviate from the prepared questions. And so that the interviewee gets the opportunity to reason, in a comprehensive manner, about the questions. In addition, the semi-structured interview format allows the interviewee to introduce new information and ideas, which previously might not have been thought of (Gill, 2008, p. 291). Using the semi-structured format, I intend to conduct face-to-face interviews and e-mail interviews; both having their particular benefits and disadvantages, which are discussed below.

2.2.1 E-mail interviews

As opposed to the traditional, face-to-face interview, interviewing someone per e-mail does not require traveling to far off places, acquiring of recording equipment or time consuming transcribing. In fact, it allows the researcher to interview several persons at the time, anywhere in the world, at no cost at all. Ideally, the method enables the interviewees to thoroughly think through the questions and gives them the time to give a detailed response. Hunt & McHale discusses this in their article “A Practical Guide to the E-Mail Interview”:

“This time for reflection enables deeper processing of information and a more complete review of the issues that are being discussed. It is often the case within conventional interviews that the interviewer will look at the transcript after the interview is completed and realize that there were further subsidiary questions that could have been asked.” (Hunt & McHale, 2007, p. 1416)

The fact that the interview is carried out within an e-mail script enables the researcher and the interviewee to scroll back and forth, to avoid repetition and reflect on previous questions and answers. Further, because the interview is not done in person it has a sense of anonymity, and the interviewee might be more motivated to answer sensitive questions. However, due to the interview being impersonal, all the information related to personal interaction goes missing; that is, body language, facial expressions, changes in tone of voice or other social cues. Another concern is that the interview can take too much time, especially if the interview is of low priority for the participant; therefore losing its focus (Hunt & McHale, 2007, pp. 1416-1418). Because of the international nature of the case study in this work – imposing limitations regarding time and money – e-mail interviews will be necessary for carrying out the study. Naturally, more methods
than e-mail interviews are used in conducting the case studies, and these are illuminated in the subsequent part.

2.3 Case study

In trying to find answers to the research questions of this study, one way forward will be to study a Swedish case. Since the literature about suburban retrofitting, almost inclusively concerns American examples, investigating a Swedish case – by applying the existing theories about suburban retrofitting on it – is an exploratory method; which hopefully will result in new findings that can contribute to the existing theory base. The preconditions for suburban retrofitting within Sweden look slightly different than in the U.S. On one hand, the car is losing its appeal; however, there is still an on-going expansion of large-scale, suburban commercial areas. Furthermore, in Sweden, light rail systems are seeing an unprecedented popularity, and new systems are steadily being introduced. These differences in preconditions does not necessarily mean suburban retrofitting is more suitable in either case – but, since the Swedish theory base about this phenomenon is lacking – the case study might be helpful in answering some of my research questions.

Turning to the definition of “Case study”, a useful one can be found in Jennifer Rowley’s article “Using Case Studies in Research”; namely: “an empirical inquiry that investigates a contemporary phenomena within its real life context, especially when the boundaries between phenomenon and context are not clearly evident” (Rowley, 2002, p. 18). Further, the case is bounded by time and activity, and the researcher studies the case in depth by using various data collecting methods (Creswell, 2003, p. 17). Rowley notes that this type of research is suitable when the existing theory basis is lacking, and useful at early stages of a research project, when new perspectives are needed. However, she also argues that this is a somewhat outdated view on the application of case studies, and that case studies can be useful at later stages of a project as well. Some sceptics argue that the method lacks objectivity and is unstructured, and therefore needs to be done with extra caution; despite this criticism the method is widely used within research (Rowley, 2002, pp. 16-17).

The research evidence found in the case studies of this work is collected through interviews, websites, document, reports and observations of urban physical conditions. As opposed to using a survey, the level of detail found about each case is larger, but the control over the variables within the cases is thus less. When data have been collected, it is necessary to generalise the findings in a way so that it contributes to theory. Which can only be done if the case studies are sufficiently supported by theory. In addition, the researcher need to assess which data to use to support or disprove his or her propositions (Rowley, 2002, pp. 16-20).

The selection of a case for this work has mainly been motivated by the relevance to the research purpose and research questions, along with the accessibility to information. A relevant case, for this work, is a Swedish commercial area at the urban periphery going through a transformation towards becoming multifunctional; taking on the character of a city district. Or an area on the verge of such a transformation. Moreover, since introducing public transportation is an important aspect of suburban retrofitting, such a system should be planned for the area.
With this intention in mind, I’ve chosen an area called “Kungens Kurva” outside Stockholm, Sweden. Located in Huddinge, south of Stockholm, the area contains 150 various establishments that together constitute the biggest retail agglomeration in Scandinavia. It is an interesting case since its preconditions for redevelopment is soon to be improved with stronger public transportation; public authorities are planning for a new light rail line to the area. And because the official presentation of the redevelopment project is very similar to the definition of suburban retrofitting. It is currently in an early phase; the comprehensive plan for the area is finished but there is yet to be physical results on the site. This however does not affect its ability to shed light on the research questions as its overall physical design seems fairly fixed.

Moreover, by choosing to do a case study about Kungens Kurva – and because the businesses in the area are still doing well economically – one of the major differences between American examples of suburban retrofitting and European ones becomes clear: Namely that the preconditions for radical change of these areas are not as good in Europe. An area in total decay is very transformable and the political will to redevelop such areas is often strong; whereas the ones that are still doing well might be problematic from an environmental point of view but still bringing in substantial tax revenue to the municipality in question; thus redevelopment involves greater economic risk. This difference proves to be of significant importance regarding answering the research questions.

Lastly, in order to gain further understanding about the research questions, it is particularly interesting to identify the motives, or the resistance, of relevant actors; concerning redevelopment of the area. The data collected in the case study, along with the mentioned literature review and interviews, need to undergo a “critical analysis” for any conclusions to be made. Relevant conclusions can subsequently contribute to the subject’s theory base. As for the next part of this chapter, critical analysis will be described more in detail (Kungens Kurva, 2013).

2.4 Critical analysis

In order to do a critical analysis, one needs to review a substantial amount of literature, along with collecting information from other sources, and thereafter assess its relevance to the study. Thereafter, the objective to reveal the assumptions, theories and values upon which the collected information is grounded. The level of clarity concerning what theoretical basis or assumptions that have formed the research material will vary; thus, the material might need to be approached using another position – to clarify the intentions of the authors or study persons involved. A critical approach means analysing the validity of the arguments, connecting research evidence with conclusions. It also means assessing whether the sources are reliable or not. Lastly, the researcher conducting a critical analysis should compare the analysed works, putting them into a context so that their individual standpoints, arguments and values can become clear (Walliman, 2011, pp. 60-61).

Applying the method of critical analysis to this work would, for example, mean to illuminate the motives of the actors involved in redeveloping mono-functional commercial areas at the urban periphery, and the ones discrediting such a development. It would further amount to looking at whether areas that have undergone suburban retrofitting can be considered sustainable. Firstly done by critically analysing the sustainability concept in itself, and the indicators for sustainability; thereafter by evaluating whether the retrofitted areas, labelled as sustainable, actually are just that.
The desired result is a better understanding of the motives behind suburban retrofitting and what are required of them in order to be considered sustainable. In the upcoming chapter, we critically explore the relevant issues through a literature review.

3. Literature review

The review begins by looking at the U.S. phenomena of “Suburban retrofitting”, i.e. the act of redeveloping, often declining, commercial areas at the urban periphery into mixed-use, dense and transit-oriented city districts. This phenomena has been made possible through the decline of suburban environments and new attitudes towards transportation – explained further in the introductory chapter. Naturally there are criticism concerning this concept, which we will discuss partly by exploring the relevant literature, and by looking at the outcomes of real life architecture.

We continue in part 3.2 by looking at light rail systems and their relation to urban development. Urban transit can give rise to different forms of urban development, often depending on the role of public and private actors. The phenomena of “transit-oriented-development”, born through the new urbanism movement – but with predecessors dating back to the late 1800s – still have great influence on urban planning and is prevalent in suburban retrofitting. Furthermore, it might seem obvious that the use of massive retail establishments at the urban fringe and the car, is highly interdependent; an idea further accentuated by the fact that these establishments normally are located near highways. In this literature review, we question that notion by looking at research showing us contradictory results – for example, we will see that most trips to the mentioned areas, in fact, are not dependent on the car as mode of transport.

Part 3.3, deals with the concept of sustainability; having as many definitions as interpretations. To fully understand the concept, our perception of nature, as well as the political motives for using such a vague and ambiguous term, are deliberated. Further, we discuss the opportunities – generated by the mentioned ambiguity – to promote unsustainable activities using the sustainable development language. Something also known as “cosmetic sustainability”. Lastly, we consider the question under what circumstances suburban retrofitting should be seen as sustainable development.

3.1 Suburban retrofitting

During the last decade, in particular, we have seen a substantial decline of the automobile and the shopping mall in the U.S. Along with other factors, described in Ellen Dunham-Jones’s and June Williamson’s book “Retrofitting Suburbia”, such as; environmental concerns, more positive attitudes concerning public transit, older suburbs becoming more centrally located due to urban sprawl; and changing demographics, leading to a more diverse, suburban population. These developments have given birth to the relatively new phenomenon called “Suburban retrofitting”.

Suburban retrofitting can be described as densification and diversification of the urban edges; introducing other functions than the typical residential or commercial areas; such as workplaces, apartments, libraries, parks and other public uses. Ideally changing the area into a diverse city district and consequently opening up possibilities for introducing public transit services. In fact, public transit is often a crucial precondition for densification of suburban areas. Dunham-Jones & Williamson argue that after studying over 80 retrofitted areas, the introduction of light rail was
identified as one of the most important facilitators for redevelopment (Dunham-Jones & Williamson, 2011, pp. 11-12). A successful suburban retrofitting project is an alternative to the car-oriented, villa-dominated suburbs that usually characterizes the urban periphery.

Another writer and urban designer, Galina Tachieva, is promoting similar redevelopment initiatives; however, calling them “sprawl repair” strategies. These are defined as: “Sprawl repair transforms failing or potentially failing, single-use, and car-dominated developments into complete communities that have better economic, social and environmental performance”. The sprawl repair proposals can, simplified, be described as using oversized parking lots for offices and residential buildings, connecting streets; forming block structures. Along with adding public places and greenery. Further, the area is provided by public transport, typically a light rail system. Altogether creating a dense and well-connected urban structure. Tachieva, alike Dunham-Jones & Williamson, argues that commercial areas are particularly suitable for sprawl repair; which the examples below illustrates (Tachieva, 2010, pp. 129-151).

3.1.1 Suburban retrofitting of commercial areas

Most suburban retrofitting projects to date have been carried out on sites of dead shopping malls. There are numerous benefits related to using the sites of dead malls for suburban retrofitting. Because shopping malls typically needs easy accessible, substantial expanses of land, there are great possibilities of creating something completely new; making them appealing for urban designers, planners and politicians. In addition, dying shopping malls spread blight and lead to value loss of adjacent property. Therefore public resistance is weak and implementation of suburban retrofitting projects often easier than conventional ones. (Dunham-Jones & Williamson, 2011, p. 114). Dunham-Jones explains how the decay of American malls is opening up new possibilities:

While these empty or declining structures may once have been the pride of the municipalities in which they were built – providing significant tax revenue, jobs, and consumer choice – today they lower property values, spread blight, and diminish opportunities. It is not a coincidence that the majority of suburban retrofits to date have been on dead-mall sites” (Dunham-Jones, Ellen, 2005, p. 9).

At a first glance, it might seem evident that redeveloping declining commercial areas, alike the ideas about “suburban retrofitting” or “sprawl repair”, is the right way to go. Australian researcher Peter Newman questions this notion in his paper “Why do we need a good transport system?” by pointing out the inherent limitations in commercial areas at the urban fringe:

“While strong arguments can be made to recreate activity centres anchored by retail into mixed use centres, the reality is that these types of centres will be limited by their origins. Shopping centres do not provide environments for innovation or development of the knowledge economy. The corporate shopping centres by their nature, economically and culturally, provide the blandest representation of a monoculture and add very little to sense of place” (Newman, 2013, p. 9).

On both sides of the issue, valid points are raised. If retail centres are turned into a mixed-use developments purely by changing their main activities – ignoring the parking lots and concrete landscapes that typically constitute the surrounding environment – indeed, Newman’s is right in his criticism. On the other hand, the kind of “suburban retrofitting” that Dunham-Jones,
Williamson and Tachieva are arguing for has a clear emphasis on public space. For example, Dunham-Jones writes about the importance of public places in retrofitting projects:

“Networks of streets and squares typically replace superblocks; parks replace parking lots; and city halls, libraries, schools, and performing arts venues provide spaces for civic interaction (an aspect of life that may be increasingly important in diverse communities with large numbers of single households” (Dunham-Jones, Ellen, 2005, p. 13).

In addition to the mentioned inherent limitations in commercial areas, concerns have been raised about the “instant cities” that suburban retrofitting projects amounts to; since large built up areas are constructed at one time. However, current challenges concerning the environment and demographic changes, might not allow sufficient time for the growth of urban forms traditionally considered authentic.

3.1.2 Instant cities or incremental urbanism?

The evident risks with suburban retrofitting projects, and their resulting, rapidly built up areas, are that these will become mono-cultural, monotonous and expensive; thus, weak in attracting diverse functions, businesses and street life. Instant cities, as a result of modernistic urban planning, were already heavily criticized in the early 1960s. For example, by architecture and urban planning critic Jane Jacobs. In her most famous work “The death and life of great American cities”, Jacobs points to the many problems related to mono-cultural and inefficient, instant cities:

Large swatches of construction built at one time are inherently inefficient for sheltering wide ranges of cultural, population and business diversity. They are even inefficient for sheltering much range of mere commercial diversity (Jacobs, 1961, p. 191).

One of the major problems with instantly built up urban areas is that they change physically very little over time, and that the changes often appear as gradual decay instead of new uses contributing to street life. Thus, for a city district to contain real diversity in people and activity, real diversity need to exist concerning buildings; that is, a city district needs both new and old buildings. A city district with only new buildings, Jacobs argues, simply cannot house a variety of establishments due to high rents or investment costs. The result is that the only establishments that can exist in the area are the ones that can support the cost of new construction; either high profit establishments or those that are greatly subsidised. Which, in practice, usually mean chain stores or public buildings. However, high profit establishments are often dependent on the low profits ones, since they are part of a total environment and the old buildings need to be there in order for it to be vital and interesting (Jacobs, 1961, p. 188 & 198).

Let it be that cities, built more or less instantly, neither have the vitality or diversity that older, incrementally built metropolitan areas appear to have. Does that mean the urban periphery should stay the same – or perhaps worse – fall into decline? Several counterarguments can be found in the literature about suburban retrofitting and sprawl repair. Dunham-Jones and Williamson question the idea of incremental urbanism as the only “true” urbanism:

“However, love of incremental urbanism can also lead to indiscriminate disdain for that which is perceived as inauthentic. Large new urbanist projects in particular are often derided as “instant cities” and “faux downtowns.” This kind of design critique applies to many suburban retrofits, but
often fails to distinguish the detrimental effects “instant architecture” from the potential benefits of “instant cities.” (Dunham-Jones & Williamson, 2011, pp. 2-3).

The benefits that Dunham-Jones & Williamson are referring to are the scale and speed of which an “instant city” can be built; benefits critically needed in times of climate change. This is a particularly valid argument since the areas that are subject to suburban retrofitting also amount to the largest CO₂ emissions in our cities. In addition, we need to take into consideration that 75 % of urban growth in the U.S., do in fact, take place in the suburbs. Thus, neglecting that reality and hoping for a future organic growth of existing cities, might be resorting to nostalgia. The alternative to retrofitting projects, would, under current conditions, most likely be conventional suburban villa-areas. Therefore suburban retrofitting projects – even if they do not immediately possess the same qualities as downtown areas – should be encouraged. If any real street life or diversity of functions will take place in an instantly built city district, the most necessary condition is time; as construction costs will gradually be paid off, conditions for diversity improve. To disprove the argument that instantly built, relatively homogenous areas, is bound to fail – which Jacobs among others argue – Dunham-Jones & Williamson give several examples of the contrary. (Dunham-Jones & Williamson, 2011, pp. 2-8)

One of the examples, given by Dunham-Jones & Williamson to illustrate how instant cities, in face, can age well; is called Morningside heights, located on the upper west side of Manhattan. In 1897, the area exclusively contained institutional buildings; such as Columbia University and Teachers College. Within twenty years the city district went from a, more or less, unexploited part of Manhattan, into a mainly residential area. In the 1950’s, a large scale residential area called “Morningside Gardens” was built in the city district; a result from modernistic planning and slum clearance. At the time, Morningside Heights was plagued by social problems, drug dealing and was thus, by many, considered unsafe. The situation was then slowly turned around and nowadays the area is multifunctional, safe and highly attractive, in particular for the middle class professionals. (Minn, 2013; Dunham-Jones & Williamson, 2011, pp. 7-8)

To further illustrate the area’s multitude of functions: according to the New York City Department of City Planning, Morningside Heights did, in 2011, contain 28 % exclusively residential buildings and 10% buildings that accommodate either mixed residential and commercial functions, or offices combined with commercial activity. The rest of the land is mainly occupied with institutions (20 %) and open space/recreation (30 %) (New York City Department Of City Planning, 2013). This division of functions is illustrated below in figure 3.

Interestingly enough, the same area was used by Jacobs to illustrate the harmful effects of instant cities. This is understandable because of the social problems prevalent at the time Jacobs expressed her critique. The construction of the housing project “Morningside gardens” was particularly criticised. Jacobs depicted it as a kiss of death for the whole area:

“...the planning arms of the city government got together, applied more planning theory, wiped out the most run-down part of the area and built in its stead a middle-income cooperative project complete with shopping center, and a public housing project, all interspersed with air, light, sunshine and landscaping. This was hailed as a great demonstration in city saving. After that, Morningside Heights went downhill even faster.” (Jacobs, 1961, p. 8)
Perhaps, Morningside Gardens didn’t give Morningside Heights much additional vitality and urbanity, due to its monotonous nature; being a pure residential housing project. Nevertheless, the fundamental cause for the social problems in the area might have been the strong presence of “single room occupancy” hotels. Which many argue was the cause for social decline and problems with crime in the neighbourhood (Eichner, 1957).

Figure 3. Division of functions in Morningside Heights area (New York City Department Of City Planning, 2013).
One may conclude from the discussion about Morningside Heights that mono-functional areas can, and will, develop into diverse areas if the right preconditions are there. In the case of Morningside heights, a nowadays diverse area; it is clear that factors other than the initially built architecture have dictated the future of the area. Instead, the good location of the area, its strong public transport connections along with generous amounts of (nowadays safe) green areas led to the neighbourhood we see today; rather than initial mixed-use developments. Further, as buildings aged, and the housing market attracted a more diverse clientele; public places in the area became less family-oriented; resulting in a richer, more urban, public life in Mornington Heights (Minn, 2013; Dunham-Jones, Ellen, 2005, p. 9).

Without disregarding diverse architecture as an important factor for the success of an area, I’d like to suggest that there are other, equally important factors at play. Even a large scale, rather monotonous, housing complex like Morningside Gardens are bound to be successful when located on central Manhattan, just because of its beneficial surroundings and context. In the case of redeveloped commercial areas at the urban periphery, the surroundings are likely to be less important for their success. Instead, their location will often be a significant disadvantage. Thus, without an effective public transportation system, it will be difficult for suburban retrofits to achieve the desired urban qualities. This has particularly been the case for the Swedish “million program” (see chapter 1.1.4) suburbs, and this is also one explanation to why the million program has been so unsuccessful. For many years, inhabitants in the suburbs Tensta, Rinkeby and Hjulsta, northwest of Stockholm, did not have efficient public transportation. Inhabitants needed to use temporary bus lines until a subway line to the area was finally built. (Pappas, 2013). In fact, some parts of the million program are currently being redeveloped in projects like “Hallonbergen-Ör” in Sundbyberg, north of Stockholm. Even though the project is at an early stage, the vision about the area could be seen as suburban retrofitting; as it involves densification and making the area more urban (Sundbybergs stad, 2011).

In addition to the million program suburbs, there are several recently built city districts in Stockholm that fall into the category “instant cities”. Hammarby Sjöstad is perhaps the most well-known example; often regarded as a success due to its high environmental standards. Construction of the area began in 1994 is predicted to be entirely finished in 2017. By then, 10 000 new apartments have been built in the area that used to be an industrial site. (Koch, 2013). The area has already become fairly vibrant, and have about 40 restaurants. Other examples of instant cities are being planned in Stockholm, such as Norra djurgårdsstaden and Hagastaden. With a substantial lack of housing; and former industrial areas and underused land being the primary targets for new development; it is hard to avoid building “instant cities”. In particular if there is a need of treating polluted soil, as such endeavours require big initial investments. Consequently new projects often need to be sizeable, both to fulfil political wishes of lessening the housing shortage and to cover high initial costs.

So far, we have only discussed the theoretical principles of suburban retrofitting – and its potential complications – but to clarify how this phenomenon is realised in terms of the built environment, we shall look at two examples from the U.S.
3.1.3 Examples of suburban retrofitting

To concretise the concept of suburban retrofitting, we will look at two relevant redevelopment projects carried out in the U.S; “Mashpee Commons”, in Mashpee, Massachusetts and “Downtown Kendall” in Miami Dade County, Florida. Mashpee commons is a small town located on a peninsula called Cape Cod, sticking out into the Atlantic Ocean. Due to the high quantity of up-scale summer houses on Cape Cod; tourism and temporary residence is crucial for the region’s economy. The peninsula is characterized by low density developments, and the resistance to other development forms is strong. In the 1960’s, the New Seabury Shopping Center was built (see figure 4); a commercial strip center; containing a pharmacy, supermarket and other convenience services.

Figure 4. New Seabury Shopping Centre in the 1960s. (Tachieva, 2013).

In the next two decades the peninsula experienced a massive population growth, and as a result, the owners of New Seabury Shopping Center decided to convert the strip center to a “village center” (see figure 5 below). Their redevelopment plan, was permitted in 1986 and redevelopment of the area began. The area’s urban fabric was made denser by introducing a block structure and several new civic functions was added, such as a post office, a library and a church. In 1993, more retail functions were added, like a video store and a liquor store; strengthening the area’s neighbourhood character. Five years later, thirteen housing units above stores were added; consequently providing the last primary function needed for the area to be a complete neighbourhood. During the 2000s, more dwellings were added and today the area is a diverse and vital centre of the Cape Cod peninsula. The suburban retrofitting of the area, has been a relatively slow and incremental process due to outdated regulations; making multi-functionality impossible. (Dunham-Jones & Williamson, 2011, pp. 97-99).

Figure 5. Market Street in Mashpee Commons after redevelopment (Walker, 2007).
The second example, Downtown Kendall, is located about nine miles south of downtown Miami; and used to be the site of a highly dispersed suburban landscape, mainly built with vast parking lots, office buildings, a regional shopping mall and a commercial strip.

Downtown Kendall is delimited by three regional roads – a highly trafficked location – and beyond those, there are small scale apartment blocks.

The redevelopment of the area was triggered by a need to control the rapid, and somewhat chaotic, westward growth in the Kendall region; and was initiated in the mid-1990s by the local chamber of commerce by compiling a new master plan for the area. Three main objectives can be identified in the plan; the wish to improve conditions for pedestrians by transforming existing strips into arcaded boulevards; to densify the area with perimeter block buildings; and to use at least 15% of the properties for public squares. This turned out to be complicated due to the difficulty of getting the large number of property owners in the area to reach consensus (Dunham-Jones & Williamson, 2011, p. 194; Menard, 2007).

After the zoning ordinance – needed to realize to comprehensive plan – was passed by Miami-Dade Country; the area experienced an immense growth, particularly due to construction of new condominiums (over 3000 new dwellings were built – see figure 7). In addition, new retail space within mixed-use buildings was built, parking lots were replaced by parking garages; and walkability was greatly improved; altogether making the area approach the long term vision (see figure 5. above). A Metrorail system with two stations serving the area already existed, however with poor pedestrian connections due to large scale park and ride facilities. After the suburban retrofit, the two stations were better integrated into the area and had an increased accessibility for pedestrians (Dunham-Jones & Williamson, 2011, p. 193 &
This kind of integration with public transit is often referred to as “transit oriented development”; an important term within American planning, and for suburban retrofitting projects. As we will see in the next part, the term has had a recent upswing, but the urban planning concept origins from the 1800s.

3.2 Transit oriented development

Starting off by trying to define “Transit oriented development” or “TOD”, the obvious approach is to turn to the originator of the term, Peter Calthorpe. Who together with Sim Van der Ryn, published “Sustainable communities” in 1986. A book that helped launch the sustainability concept and “sustainability” as a goal for urban development. Seven years later, Calthorpe introduced the concept of TOD in “Next American Metropolis: Ecology, Community, and the American Dream”. Along with this work, he started a movement called New urbanism, promoting the mentioned concept of “sustainable communities” – that is, dense neighbourhoods characterized by walkable streets, mixed uses and not the least TOD (CalthorpeAssociates, 2013; CNU, 2013). Calthorpe claims that TOD involves the following elements:

“Moderate and high-density housing, along with complementary public uses, jobs, retail and services, are concentrated in mixed-use developments at strategic points along the regional transit systems” (Calthorpe, 1993, p. 41).

The idea of urban developments, concentrated to urban transit nodes, is not new. On the contrary this concept derive from the 1800s. Perhaps the most influential ideas originate from Ebenezer Howard’s and his design of self-sufficient “garden cities”; neighbourhoods located as satellites of the central city, connected by rail transit and roads; containing no more than 32000 inhabitants and supplied with generous amounts of green space. However, the garden city later gave rise to Le Corbusier’s utopian idea of the “Radiant city”. Retaining the notion of self-sufficient neighbourhoods, but radically increasing the scale of housing and completely adapting the urban structure to the automobile. These are ideas that have influenced urban planning strongly to this date (Jacobs, 1961, pp. 21-25). The notion of “neighbourhood design” was already heavily criticized by Jacobs in the early 1960’s:

“To hunt for city neighbourhood touchstones of success in high standards of physical facilities, or in supposedly competent and nonproblem populations, or in nostalgic memories of town life, is a waste of time. It evades the meat of the question, which is the problem of what city neighbourhoods do, if anything, that may be socially and economically useful in cities themselves, and how they do it” (Jacobs, 1961, p. 114).

What Jacobs meant was that the idea of a self-contained, introverted neighbourhood does not reflect reality. The social dynamics of town life strongly differs from urban life in the sense that the people in a town of 5000-10 000 inhabitants are connected to each other in natural ways, whereas typically, there are very few natural cross-connections found in a big city neighbourhood. Instead, a city neighbourhood is dependent on people from other parts of the city in order to be lively and economically diverse. Thus, an isolated, suburban, satellite city cannot function as an inner-city district (Jacobs, 1961, pp. 115-116). However, this kind of urban planning can generate a large amount of public transportation users.
One of the most influential urban planning strategies in Stockholm is the “ABC city”, which basically means planning scale, functionalistic homes, workplaces and services in self-sufficient satellite suburbs connected to the high capacity subway system (tunnelbanan). Haas et. Al. writes that:

Stockholm’s Metropolis model one of the most successful TODs. Despite The high motorization in the Stockholm Region the share of public transport is very high, especially during rush hours. The centres in the ABC Suburbs or cities act as public transport nodes, whereas the diversity and density of the ABC City attracts passengers and balances the public transport demand between the suburban pearls and the urban nucleuses. The Urban or suburban centres are interconnected with the speedy and frequent tunnelbana (Haas et. al., 2012, p. 8).

An important explanation why light rail systems is so popular at the moment is its connection to the concept of urbanity, which is exactly what most Swedish municipalities pursues. In Stockholm, light rail systems are seen in many recent urban planning projects such as Hammarby Sjöstad, Norra Djurgårdstaden and Västra Ursvik. However, despite a common notion of light rail systems as a crucial part of sustainable development, bus systems and light rail systems cannot compete with the car on a regional scale. The reason is that they seldom are separated from other types of traffic; like the subway system is. A study from KTH shows that if the subway system would be shut down, public transportation users in the inner city would decrease by about 50 %. Furthermore, on a regional scale the decrease could amount to up to 75 % (Haas et. al., 2012, pp. 15-16).

In numerous European cities, TOD has been an important influence in the field of community design and light rail has been the transit mode of choice. Examples are found in French and German cities such as Saarbrücken, Strasbourg and Karlsruhe. But light rail systems are also seen on the American west coast, in Portland, San Diego and Seattle (Arrington, 2004, p. 189; Priemus & Konings, 2001, p. 188). Light rail has thus become intimately connected with TOD and consequently the idea of the “sustainable city” in the whole western world.

In the literature about suburban retrofitting, it’s presupposed that the intended urban areas will be built according to TOD principles. Nevertheless, most of the sites that are appropriate for suburban retrofitting are not located near public transit lines. To deal with this problem, Dunham-Jones and Williamson mention two viable strategies. Either a public transit system is added to existing areas that have undergone suburban retrofitting; improving the preconditions for further redevelopment; a strategy that comes with both high costs and difficulties integrating public transit in an areas originally not planned for it. The other approach is to proactively add public transit to commercial strip corridors; creating a more pleasant environment for pedestrians: thus attracting further mixed-use redevelopment in form of offices, residential functions and retail stores (Dunham-Jones & Williamson, 2011, pp. 11-12).

Some would argue that public transit to commercial strip corridors is, at least initially, highly ineffective. Since environments, containing retail establishments at the urban periphery are completely adapted to the automobile; and because the automobile is needed to transport the bought commodities home. The latter notion is questioned in the next part of the chapter, as recent research shows that our buying behaviours, in most cases, do not motivate the use of private automobiles.
3.2.1 Transportation and commercial areas

In most cases, commercial areas at the urban fringes are located near highway arterial intersections; built strategically along suburban growth patterns. The motives to locate vast commercial areas along major highways are mainly space requirements for parking, cheap land and easy access. Naturally, these establishments are consequently designed and built for the automobile, consequently most of the customers use this mode of transport. Sometimes alternatives are non-existent or highly inconvenient, such as slow bus lines with sparse timetables (Lorenco & Bardi, 2007, p. 1; Pickford, 1963, p. 1).

Nonetheless, the most important argument that customers have for taking the car is transporting the purchased items home. This argument has proven to be untrue. A study, made in the context of Swedish shopping malls, show that only a small share of customers leave the stores with items that would imply the need of a car. More than 80% had made no visible purchase or carrying a single bag, when leaving the commercial area (Smidfelt Rosqvist & Hiselius, 2012, p. 17). The small amount of bought items might be explained by the fact that many customers see the trip to the shopping mall as an excursion – something pleasurable. Perhaps many customers do not even plan to make any purchases from the beginning. Nonetheless, according to another study conducted by Karoline Kristo, about 80-95% of the trips to commercial areas at the periphery are in fact done by car. Accordingly, only about 5-20% of the trips are done by bike, bus or by foot. As expected, the share of trips done by car decreases the closer the commercial area is to the city (Kristo, 2012, p. 11).

No trips within the study are taken by train, a fact that appears quite obvious since normally there are none. Not unlike the ideas found in the literature about suburban retrofitting, Kristo argues that in order to give public transit a bigger share of the modal split of transportation; the commercial area eventually need to grow together with the core-city; increasing its potential to be naturally integrated with the city (Kristo, 2012, pp. 11-12). The lack of public transportation is one of the reasons that commercial areas at the periphery is argued by many to be an unsustainable urban phenomena. Consequently redeveloping these areas, through suburban retrofitting projects, may be considered a form of sustainable urbanism. However, before we can make such claims, the concept of sustainability need to be deliberated – and we need to thoroughly assess whether suburban retrofitting should be considered sustainable.

3.3 Sustainable development

The term “sustainable development” origins from a report written by the Brundtland Commission, published in 1987. The commission defined sustainable development as a “Development which meets the needs of current generations without compromising the ability of future generations to meet their own needs.” From that point on, great efforts in disambiguating the initial definition has been made, however not resulting in a new, widely accepted definition. Instead disagreements become apparent every time a new definition is presented, which has led to the conclusion that the initial definition actually possesses a constructive ambiguity. Something needed due to the world’s diverse political cultures. Sustainable development involving participation and dialogue – understood as a democratic process – instead of an end (Bärlund, 2013).
The intergovernmental panel on climate change, the IPCC, considers the concept of sustainable development crucial in dealing with climate change. However, their assessment-report about “Sustainable development and Mitigation” shows that they are well aware of the criticism concerning the sustainability concept. The IPCC discusses the criticism that has to do with the concept being vague, used for supporting cosmetic sustainability or being inherently delusory. Their response is that the vagueness of the term could be constructive, in the sense that it allows different interests to engage in the debate. Cosmetic sustainability can be dealt with by improved monitoring and analytical techniques. The IPCC considers the last point, about sustainability being inherently delusory, the most serious concern. For example the notion of sustainability as something anthropocentric and impossible to obtain without a reformulation of values, and that biophysical constraints will limit the amount of future development that is sustainable. According to the IPCC this criticism “raises fundamental value questions that go to the heart of present debates about environmental and social issues” (IPCC, 2007).

The notion of sustainability as something impossible to obtain without reformulation of values is found in Erik Swingedouw’s part of (Krueger & C. Gibbs, 2007). He questions the notion of a singular nature, and the idea that this singular nature needs “sustaining” in order to avoid an apocalyptic future. Instead he depicts a world that consists of a multitude of natures, unpredictable and constantly changing – far from the idea of nature constituted by a regular and rhythmic process. Swingedow claims that the idea of a single nature is a hindrance for asking real, and serious questions about politics of the environment. He refers to Slavoj Žižek who is known to have stated that “nature does not exist”, and clarifies what Žižek means in the following quote:

“..the “Nature” we see and work with is necessarily radically imagined, scripted, symbolically charged, and radically distant from the various natures that are out there, which are complex, chaotic, often unpredictable, often radically contingent, risky, patterned in endlessly complex ways, and ordered along “strange” attractors. In other words there is no balanced, dynamic, equilibrium-based nature out there that needs or requires salvation in the name of either “Nature” itself or of an equally imagined universal human survival” (Krueger & C. Gibbs, 2007, p. 19).

That being said, Swingedow reasons that “sustainability” is currently thought to be achieved through new technological inventions, such as artificial meat, cloned stem cells or artificial water – creating new natures. Or by civilization returning to a pre-industrial state, where we are “in harmony with nature” – enabling the climate to return to its equilibrium – saving us from disaster. The problem with the image of sustainability as the one solution to save us from future environmental disaster is that it inhibits us from asking some basic and relevant questions about how we currently organize our societies. Or in other words:

“Indeed, imagining catastrophe and fantasizing about the final ecological Armageddon seems considerably easier for most environmentalists than envisaging relatively small changes in the sociopolitical and cultural-economic organization of local and global life here and now” (Krueger & C. Gibbs, 2007, p. 19).

As the above-mentioned quote suggests, one of the main points of Swingedow’s text is that we need to politicize the environment. The argument is that we’re currently in a time of post-politics, meaning everything and nothing is politicized, however few decisions that would amount to
anything irreversible or conflictive are made. And that the concept of sustainable development, with its ambiguity and vagueness, is a perfect example of this (Krueger & C. Gibbs, 2007, p. 25).

It seems as if both skeptics and proponents can agree that there is an inherent vagueness in the concept of sustainable development. This vagueness creates opportunities for fraudulent actors to engage in “cosmetic sustainability”, also known as “greenwashing”, a phenomenon that is further discussed in the next part of this chapter.

3.3.1 Cosmetic sustainability and sustainability indicators

The public concern about environmental issues, along with the vagueness of the sustainable development concept, have opened up opportunities of positive promotion for businesses and governments, solely by using the language of sustainability. In trying to define “cosmetic sustainability”, a helpful definition can be found in John Robinson’s article “Squaring the circle? Some thoughts on the idea of sustainable development”, which follows, “the way sustainable development language is being used to promote what may be unsustainable activities”.

However, interpreting the situation as a mutual opposition, meaning sustainability versus cosmetic sustainability, is an oversimplification. Naturally there are differences in degree of “sustainability”, so the issue becomes how to measure sustainability rather than whether the activity in hand is sustainable or not. Immediately, the problem of which criteria to use in such a measurement arises. Robinson deliberates this difficulty:

“How can we evaluate the claim that a particular product is “green”, “environmentally benign” or “socially responsible”? What criteria should be used to weigh such claims? How does one measure and compare, say, habitat destruction versus greenhouse gas emissions, or either against unfair labor practices in developing countries?” (Robinson, 2004, p. 374).

Measuring sustainability is commonly done through the usage of “sustainability indicators”, or “SIs”. Indicators have long been used in similar contexts, such as evaluating the health of eco-systems. In that case, the process of finding the right indicators is quite straight forward. A healthy eco-system also has a high degree of biodiversity, whereas an eco-system put under stress loses its quantity of species – beginning with the most sensitive ones. Therefore the most sensitive species is a suitable indicator of the overall health of the eco-system, and looking at the fluctuation of that species gives a good indication on whether the situation is improving or worsening. However, it is not possible to fully compare the example of eco-systems to the one of sustainability. This is due to the fact that sustainability by definition is laced with human values – political and ethical. This is why Bell & Morse, in their book “Sustainability Indicators: Measuring the immeasurable?”, argue that sustainability indicators have a somewhat different nature than indicators for biodiversity:

“As one may construe from all of the foregoing, the selection and measurement of SIs is hardly a fine art and is subject to many pressures, agendas and biases. Governments often wish to portray themselves in the best possible light, and it is certainly not hard to imagine that ‘reference’ conditions may be set with a political agenda in mind (Bell & Morse, 2008, p. 41).

Of course, this does not automatically mean that sustainability indicators are not useful. Only that we need to be aware that the process of developing sustainability indicators is not scientific in the sense that it’s a process characterized by setting and testing – aiming to constantly develop the
concept further. In the case of sustainable development, changing the indicators as we go would not be compatible with the slow and sensitive process of fundamentally changing environmental and economic policy. Ultimately, if sustainability indicators will lead to a positive outcome, the selection of indicators is crucial (Bell & Morse, 2008, pp. 22-31). Subsequently, we will attempt to assess suburban retrofitting from a sustainability perspective; using some available sustainability indicators.

3.3.2 Suburban retrofitting and sustainability

The most relevant literature about suburban retrofitting gives the impression that it should be considered a sustainable form of urban development. Dispersed, car-dependent, and socially poor urban areas are turned into dense, transit-oriented, city-like places; that might have the potential to revolutionize suburbia forever. However, pursuing these urban qualities comes with more than a few risks, such as; high initial investment costs; draining the downtown areas by building, just another, monotonous place at the urban fringe, thus promoting conventional suburban lifestyles; or gentrifying a once affordable area of the city. All of which jeopardizes the initial vision of a sustainable urban area (Dunham-Jones & Williamson, 2011, pp. 12-13; Tachieva, 2010, p. 10).

What complicates things, according to Dunham-Jones & Williamson, is that suburban retrofitts, by nature, are hybrids. Nor are they core-cities or traditional suburbs; instead, characteristics of both urban forms can be found. Suburban retrofitts often possesses conventional suburban attributes such as high parking ratios, chain retail outlets, a maintained automobile dependency (despite available public transit options) and architecture often looking nostalgic and pastiche (Dunham-Jones & Williamson, 2011, pp. 12-13).

The question is whether suburban retrofitting projects – maintaining so many suburban characteristics – ever can be considered sustainable. In attempt to find an answer, we need to find relevant sustainability indicators, and to look at the suburban retrofitting concept with those indicators in mind. The guidelines in (United Nations, 2007, pp. 10-14) about sustainability indicators gives an understanding of which indicators might be suitable in evaluating suburban retrofitting. A comprehensive list of CSD (Commission on Sustainable development) indicators is given and the first step is to estimate which indicators are most relevant for the case of suburban retrofitting. These seem to be: “Debt to GNI ration (Sustainable public finance)”, “Change in threat status of species”, “Carbon dioxide emissions” and finally “Modal split of passenger transportation” (United Nations, 2007, pp. 10-14).

So, what does affect the mentioned sustainability indicators? Starting with “Sustainable public finance”, it is interesting to point out that most projects to this date has been a result of substantial public investment. However, Tachieva argues that these investments pay off with time:

“The first challenge is financial, as sprawl repair requires considerable initial investment. It becomes more financially feasible, however, when analyzed from a long-term perspective and when compared to conventional suburban development. The increased density and mixed uses, for example, reduce the cost of infrastructure per capita” (Tachieva, 2010, p. 10).
The notion that the investment will be returned in a long-term perspective is also found in Dunham-Jones & Williamson’s reasoning. In fact, they argue that despite the recession, suburban retrofitting is still gaining momentum due to the public sector in the U.S. Planning departments are becoming more proactive in planning for sustainability, carrying out mixed-use rezonings and improving conditions for pedestrian traffic. Moreover, Dunham-Jones & Williamson mention a joint operation by state authorities called “Partnership for Sustainable Communities”; providing collective funds that are directly stimulating suburban retrofitting efforts.

As opposed to this optimistic depiction of successful public initiatives concerning suburban retrofitting, Errol Cowan, professor of real estate at University of San Diego, argues that suburban retrofitting efforts have come to a halt. According to Cowan, redevelopment projects in the U.S. had numerous opportunities of public funding, such as federal block grants and state tax revenues; however, due to a recent shift in the political climate, Cowan notes that many of these initiatives are now gone:

“Due to political resistance to taxation and tax-based solutions, federal and local governments are in a budgetary crisis that severely constraints funding of redevelopment projects. Since 2005, the use of eminent domain in redevelopment has been limited by statute in 38 states. In 2012, California became the extreme example of this trend when it limited the use of public-sector funding for redevelopment by completely eliminating redevelopment agencies and forcing the sale of already acquired properties”. (Cowan, 2013, p. 1)

The mentioned political resistance is, according to Cowan, most critical in California after 2012; a state that paradoxically was emphasized as a positive example by Dunham-Jones & Williamson in their work “Retrofitting Suburbia” from 2011. As a result of this unfortunate development, that is; the lack of public subsidies. Cowan argues that suburban retrofitting projects we have seen in the past, can nowadays only be realized in affluent urban areas. Further, Cowan claims that it has become difficult to get mortgage financing for mixed-use projects after foreclosures on mixed-use developments during the current financial recession. Instead, if urban sprawl is to be reversed; the private sector now needs to take some of the responsibility traditionally associated with the public sector (Cowan, 2013, pp. 1-2).

Turning to biological diversity, or the CSD indicator called “Threat status of species”; suburban retrofitting, normally has little negative – or sometimes even positive – influence on animal habitats. As most projects are built on dead mall sites, the existing habitats are already damaged and fragmented. Thus, suburban retrofitting projects do not amount to further damage. Another situation is where suburban retrofitting is done through “regreening”; which means restoring the existing natural areas, such as wetlands and creeks; that were destroyed when the suburban, concrete environments at the urban fringes were built. Consequently, suburban retrofitting projects can have a significant positive effect on animal habitats and the threat status of species.

The last two CSD indicators, “emissions of carbon dioxide” and “modal split of passenger transportation” seem to be strongly interrelated. Naturally the emissions of carbon dioxide are related to vehicle miles driven, VMD. The advocates for suburban retrofitting claim it reduces VMD by introducing public transit and increasing walkability; a claim that is confirmed by practical experiences. Moreover, due to the increased density that comes with suburban retrofitting, shared infrastructure becomes feasible; leading to considerable energy savings and
decreased emissions of carbon dioxide. Altogether it seems as if suburban retrofitting has positive influence on the sustainability indicators provided by the United Nations and, in many cases, could be considered a form of sustainable development.

4. Case study

The first part of the case study, 4.1, is a description of the subject of the case study, Kungens Kurva, located in Huddinge municipality, south of Stockholm. The area is about to be redeveloped in a manner similar to the mentioned examples of suburban retrofitting. We will look at the history of the area as well as the geographic, cultural and infrastructural preconditions. Thereafter the case study continues, in part 4.2, by investigating the planned functions and structure of the area. In particular the reasons why Huddinge municipality have chosen not to include housing in the vision for Kungens Kurva. Lastly the political considerations and strategies that have formed the plan to redevelop the area are explored.

4.1 About Kungens Kurva

The subject to this case study is a retail area called “Kungens Kurva”, located about 15 km south of central Stockholm, in the Municipality of Huddinge. Framed by the highly trafficked highway E4/20 in the west, a villa-area in the north and a big nature reserve in the east; the area around Kungens Kurva has a distinctly suburban character. Kungens Kurva together with another retail area called Skärholmens centrum (SKHLM), located on the other side of E4/E20; is pointed out as one of Stockholm’s regional cores; envisioned for rapid growth. With a yearly turn-over of 7.3 million Swedish crowns and 30 million visitors every year, the area is the largest of its kind in Scandinavia. Most of the establishments in Kungens Kurva are high volume stores, including electronic stores, home décor stores and grocery stores; but there are also restaurants, hotels and a cinema. (Ikano Fastigheter, 2013; Kungens Kurva, 2013; Huddinge Kommun, 2010, p. 6).

Kungens Kurva got its first establishment in 1965, when IKEA built their second store. The store is, after expanding in 2000-2002, the largest IKEA store in the world. IKEA’s owner Ingvar Kamprad chose the location for several reasons; for example, accessibility to the highway system and adjacent shopping mall “Skärholmens Centrum” along with a vast customer base from Stockholm (Torekull, 1998, s. 84). The name “Kungens Kurva” (“the kings bend”) actually originates from a famous traffic accident. According to the legend: in 1946, the speed loving king of the time, Gustav V, urged his driver to drive faster. Unfortunately, the driver obeyed and consequently ended up in a ditch, near the area we nowadays refer to as Kungens Kurva (Harrison, 2002). Initially, between the 1960s and 1980s, the area was mainly reserved for offices and industry. In the 1990s, there was a growing demand for retail establishments, which nowadays constitute the primary function of the area (Huddinge Kommun, 2010, p. 6).

Unsurprisingly, considering the location and the adjacent infrastructure, 86 % of the visitors to Kungens Kurva arrive by car. The rest of the visitors get to the area by bus, subway, cycling or walking. The subway station is located far away, so most people coming by public transport use the bus. Most of the visitors cycling or walking to Kungens Kurva lives in the same municipality, Huddinge. A travel survey of the area shows that it is difficult to walk from store to store; as a result, 45 % of the customers are using their car for this purpose. Moreover, the survey shows
that one out of five customers did not shop at all, and that about half of the customers, in fact, did not need a car for their visit. The trips done with other modes of transport than the car, are mainly taken by single households and younger customers. However, as many as 25 % of visitors arriving by car could consider using public transit, that is, if the connections were better (Huddinge kommun, 2012). Altogether, the results of the survey is in line with the average travel behaviors shown in the more comprehensive studies about retail areas mentioned in part 3.2; which, considering travel patterns, makes Kungens Kurva a representative example of this kind of areas.

Figure 8. Light rail system from Älvsjö through Kungens Kurva to Flemingsberg (Moderaterna, 2013).

At the moment, the public transport authority of Stockholm, SL, is planning a light rail system to the area. The main intention is to connect the regional city cores south of Stockholm, by building a rail connection from Älvsjö in southern Stockholm, through retail areas Skärholmen Centrum and Kungens Kurva; ultimately reaching Flemingsberg (see figure 8 above). The latter area contains a University (Södertörns Högskola) together with a major hospital (Karolinska Universitetssjukhuset, Huddinge), and is being promoted as a node for life science (Flemingsberg, 2013; Stockholms lokaltrafik, 2012). It is likely that the new light rail system will have several consequences on the Kungens Kurva area. Firstly, it will connect adjacent Shopping mall Skärholmen Centrum, with a bridge over the separating highway; enabling fast public transit trips between the two retail areas. Secondly, the congested roads around Kungens Kurva is currently limiting future growth of the area.
Improved public transport to the area would open up for new establishments and subsequently more workplaces – something that would be positive for the large scale housing areas in the west, where unemployment rates are high. Furthermore, the light rail system will open up to more diversity in the area; which is in line with a current redevelopment plan for the area (Södertörnskommunerna, 2013). Not unlike suburban retrofitting schemes, Huddinge Municipality is planning to make Kungens Kurva more city like, by diversifying the activities in the area and introducing block structure in the otherwise dispersed urban fabric. The location of the area is suitable for a new city district, with its good communications and relative nearness to central Stockholm. Nonetheless, there are some important differences between Huddinge’s redevelopment plans and the American equivalents in form of suburban retrofitting projects; differences we now will take a closer look at.

4.2 The redevelopment plan for Kungens Kurva and suburban retrofitting

As property owner’s wishes for further retail development became stronger – along with Stockholm County’s ambitions to make Kungens Kurva and Skärholmen more city like – Huddinge Municipality started to explore the possibilities for further development of the area. Moreover, the congestion problems that the area had given rise to call for improved accessibility by public transport, cycling and walking; and thus the municipality started working on a new comprehensive plan for the area. The main intention with the plan is to make clear the short and long term development of Kungens Kurva, and to deliberate the consequences of further development of the area. The comprehensive plan has a 20 year perspective, and as it’s not legally binding, the intention is that it will guide the future work with detailed plans for the area. For the future, Huddinge Municipality envisions a multifunctional area, comprised by workplaces, culture and recreation. Further, the area will be equipped with better public places, a well-defined street structure, possibilities for recreation in park areas, and improved public transit in form of light rail. In a long term perspective, the idea is to let Kungens Kurva and Skärholmens centrum grow together by covering the separating highway, E4/E20; adding housing and retail on the platform above the highway; as illustrated in figure 9 below (Huddinge Kommun, 2010, pp. 6-12).
So far, the vision might sound similar to how suburban retrofitting usually is described. The area will be denser, take on a city like character and be supplied with public transport. However, some important aspects of this project differ from the theories about suburban retrofitting; there are currently no housing planned, thus it lacks one of the primary functions of a complete city district; a big block structure will be introduced, containing substantial space for parking; the retail in the area will expand substantially, maintaining shopping as the dominant activity in the area; and lastly, since the area is still doing economically well, the endeavor is clearly proactive. We will go through these differences individually in order to assess whether this project can be considered suburban retrofitting.

4.2.1 No housing in current plan
In the comprehensive plan for Kungens Kurva it is unclear whether housing will be introduced in the area or not. In the vision for the area it is being said that the future area will be “an attractive mix of retail, housing, culture and recreation”; but also that “According to the decision of the municipal board, housing will not be developed in the area”; To clarify what the current plans actually involve I carried out an interview with the urban planner Gunilla Sundström, working at Huddinge municipality, who explained how the issue of housing has developed throughout the planning process:

“When we started working with the plan for Kungens Kurva, the politicians of Huddinge municipality gave us clear instructions not to work with housing. However, after a public hearing and discussions concerning the new comprehensive plan for the municipality, the politicians decided that we should look at the conditions for introducing housing in the area. We carried out a demand analysis which showed that there might be potential for housing in a long-term perspective; by letting
the already popular housing area called Segeltorp grow together with Kungens Kurva. This development strategy is currently being discussed” (Sundström, 2013).

During the planning process, one of the main arguments that has come up against introducing housing in the area is the issue of noise from the adjacent highway, E4. In assessing the conditions for future housing in the area, consultant firm WSP made a study that showed that noise and pollution levels were high; and concluded that it is not suitable to develop housing in the area. (Huddinge Kommun, 2010, p. 9). At the moment, the same rules concerning noise levels applies to all types of housing in Sweden. However, the ministry of social affairs have proposed that guideline values for outside noise should be raised from 55 to 60 dBA when it comes to housing units smaller than 35 square meters; thus increasing the possible locations for building student housing. Sundström thinks that Kungens Kurva might contain student housing in the future. In connection with a big infrastructure project called “Förbifart Stockholm”, which involves a highway bypass west of Stockholm, noise screens will be built along the highway by Kungens Kurva, which might improve conditions for housing in the area. Nevertheless, Sundström argues that other factors might be more important in creating a multifunctional city district. For example the current market conditions for building housing in a particular area, and the prospect of integrating new housing into the existing physical context (Sundström, 2013). To make the area more multi-functional, planners have chosen to introduce a “big block structure”.

4.2.2 Density and future functions of Kungens Kurva
The design proposal for Kungens Kurva has a clear focus on density regarding the buildings and the street structure in the area. Big blocks will be introduced, which can contain buildings owned by several property owners, together enclosing a common space; functioning both as a parking lot and a meeting place. This common space might for example function as a park, playground, theatre scene or a café.

Huddinge municipality claims that the new physical structure will lead to a more attractive and sustainable area due to the bettered conditions for effective infrastructure as well as for pedestrians and cyclists. By allowing buildings with up to 4-6 floors and introducing a light rail system, the current big box agglomerate will change character; becoming denser and attaining better conditions for new functions. The functions mentioned in the comprehensive plan – except for retail – are mainly offices, “experiences”, “non-disturbing businesses” and education. Exactly what “experiences” and “non-disturbing businesses” are is not made completely clear in the comprehensive plan; but the municipality wishes that these activities are, in some way, connected to the adjacent nature reserve. One possible combination of functions that might be common in the area is retail in the bottom floor and offices in the floors above (Huddinge Kommun, 2010, pp. 3, 17-18; Sundström, 2013)

There are two distinct differences between the suburban retrofitting projects, illustrated in chapter 3.2.3, and the redevelopment of Kungens Kurva. Firstly, the function of housing will not be introduced; at least not in the near future. And secondly, even though other functions than retail will be introduced, the retail functions in the area will continue to expand. This means that the urbanity and bustling streetlife – depicted in the vision for the area – might be very difficult to achieve. As the activities in and around retail establishments and offices are, more or less, limited to office hours, it seems unlikely that there will be much activity in the area during the
evenings. One could interpret the whole redevelopment projekt as somewhat conservative, considering the main function in the area is, and will continue to be, retail. However, as the area is still profitable, the project differs greatly from some of the american counterparts mentioned earlier in chapter 3. Thus, it seems like the redevelopment is party a proactive endeavour.

4.2.3 A conservative approach and sustainability
One can argue that what distinguishes the redevelopment of Kungens Kurva and the mentioned, real life examples of ”retrofitting projects”, is the conservative approach. There might be several reasons why the municipality has chosen a more conservative approach in the project. Firstly businesses in the area are still doing economically well, secondly the short term market conditions for building housing seems to be poor. The area is currently a bit cut off from other residential areas and lacks rail bound public transport. The last reason, and an important one, could be the lack of political interest in turning Kungens Kurva into a multifunctional city district (Sundström, 2013).

Naturally, since Kungens Kurva is one of the biggest retail areas in northern Europe, generates both income and workplaces to the municipality. Thus, the political will for radically changing the area – considering the consequences of a failed project – might be weak. That would explain why the initial instructions from the politicians was not to plan housing. Instead, housing was taken into consideration after a demand analysis, showing potential for housing in a long term perspective (Sundström, 2013).

Having a conservative approach also means having a sustained focus on the car as the main mode of transportation and increased consumption as one of the main goals. Therefore the sustainability aspect of the project is easy to criticize. According to an environmental impact assessment, the main negative effect as a result from the redevelopment project, is increased traffic. But the assessment also determines that the current cultural and natural values in the area are almost nonexistent. The overall conclusion is that the project does not contribute to a sustainable development. However, several arguments defending the project can be found in the assessment. For example it is mentioned that we probably will drive less in the future, and that the cars we drive will be more environmental. It is said that the negative consequences of the project can be turned around, if the right strategic decisions are made; promoting use of public transportation and limiting driving (Huddinge Kommun, 2010b).

It is peculiar that arguments defending the sustainability aspect of the project rely on technological development and that the right political decisions are made in the future; since the assessment should look at what the projects actually is, and not what it could be, in a better future. Further it is not just to say that expanding the retail functions in the area is sustainable as the alternative is developing retail in another peripheral, unbuilt location. There is another evident alternative of choosing central locations for the development of retail; which most likely would lead to less automobile dependency.
5. Concluding discussion

In the concluding discussion I aim to answer the research questions found in the introduction by using the findings from the literature review and the case study. The purpose of the thesis was described in the introduction as investigating if a recent strategy called suburban retrofitting – mainly found in American urban planning literature – could be relevant and useful for the Swedish urban planners and policymakers.

The first research question was whether Swedish policy makers should embrace the concept of suburban retrofitting and apply it both proactively and reactively. The redevelopment of Kungens Kurva in Stockholm is a clear example of when Swedish planners and policy makers attempt to use suburban retrofitting strategies on an out-of-town commercial area, in a proactive manner. The area still have profitable businesses, and thus the incitements to fundamentally change the area have been too weak. Housing will not be introduced and the main character in the area remains being heavily influenced by retail uses. Other factors that make a radical transformation of the area difficult are strong regulations concerning noise and pollution. It is particularly the regulations concerning housing that make suburban retrofitting projects adjacent to highways problematic.

In general Sweden’s suburban commercial areas are doing relatively well. However, this situation could change quickly, considering that Sweden has a very high amount of retail per capita; together with a generational shift which is not in favor of suburban lifestyles. At the moment, it might be more rational to reactively undertake suburban retrofitting projects in the million program suburbs, located in the outskirts of the major cities in Sweden. Several such redevelopment projects are currently taking place in Sweden. They mainly involve renovation and densification. In many suburbs within the million program there is a great need of efforts leading to better conditions for the languishing business life. Suburban retrofitting strategies can be applicable to these areas, as they lead to increased density and thus provide better conditions for businesses.

Another question asked in part 1.2 is at what point suburban retrofitting should be considered a form of sustainable development, in terms of economic, environmental and social sustainability. After studying the redevelopment Kungens Kurva, which can be considered a moderate form of suburban retrofitting, it is perhaps easier to first answer when it should not. The plan for Kungens Kurva is to maintain and develop the retail functions of the area, but at the same time introduce offices and recreational facilities. The environmental impact assessment for the project concludes that it does not contribute to sustainable development, predominantly because it leads to increased car traffic, and thus generates more emissions. Due to the increased emissions the area will not be environmentally sustainable. Further, since housing is not introduced, the area cannot be considered socially sustainable. Firstly because of Stockholm’s substantial lack of housing, which is not decreased as a result of this project. And secondly, since there will be almost no people utilizing the area after office hours, the area might feel unsafe and desolate in the evenings.

For a suburban retrofitting project to be sustainable it seems that all of the aspects of the retrofitting concept need to be fully embraced and carried out. That is, the area that is subject to retrofitting needs to undergo densification, acquire improved public transportation and a
diversification of its existing functions. Thus, it is not sufficient to merely complement an existing
monotonous area with one function that has similar characteristics as the existing one, but the
end result need to involve a multitude of functions that complement each other. Moreover, the
project should not amount to increased car traffic; instead, better conditions for public
transportation users, pedestrians, and cyclists should lead to decreased amount of car traffic.

Criticism have been raised against suburban retrofitting because of its tendency to create large
urban areas at once, and thus loses the important vitality that comes with an incrementally built
up area. However, pressing issues like shortage of housing, urban sprawl, and global warming
might be reasons enough to build complete city districts during shorter periods of time. In many
cases, instant urbanism can lead to diverse places after some time. One of the best examples of
this is Morningside Heights, on the upper west side of Manhattan. Which, to a large extent was
built in the 1950s, and for many years a monofunctional city district plagued by social problems,
but is now a highly attractive and multifunctional city district.

The case study of Kungens Kurva shows that suburban retrofitting concerning retail areas in
Sweden might be done in a more proactive, incremental manner than the American examples
that have been discussed. It means that planners and policymakers start trying to deal with the
problems related to mono-functional retail areas outside town, before they become truly
apparent. Some might argue that Kungens Kurva is still “too successful” to be suitable for
suburban retrofitting; however, it greatly depends on which time perspective one has; the area
might be a multifunctional city district in 20 or 30 years, and perhaps these first steps were crucial
in achieving that. For a comprehensive redevelopment strategy regarding Swedish retail areas,
perhaps we need to start thinking beyond immediate success, since the areas in heavy decline,
which are easy and cheap to redevelop, might currently be few. Nonetheless, many areas are
politically and economically possible to change, with a longer time perspective, towards becoming
multifunctional and more sustainable.

As for the research question concerning whether Swedish planners and policymakers should
integrate light rail systems with suburban retrofitting projects: it depends on the existing physical
infrastructure. In Stockholm, which is equipped with a subway system that has both a higher
speed and capacity than light rail systems, it seems more rational to expand this system to the
suburban locations that are suitable for redevelopment. This, of course, is a strategy that, in
short-term, is more expensive than building a light rail connection. The difference between light
rail and subway systems when it comes to diverting car trips to peripheral locations is significant
and thus subway systems are preferred when possible. In other Swedish cities that might have an
existing light rail system, or no rail-bound public transportation systems at all, a light rail
connection might still be the best solution.

Perhaps the most important conclusion one can make after investigating the topic about
suburban retrofitting, and its potential in a Swedish urban planning context, is that the
preconditions for suburban retrofitting differs greatly between Sweden and the U.S. Thus, the
subjects for suburban retrofitting in Sweden might currently rather be the “million program”
suburbs than commercial areas at the urban fringe. However, the market for the mentioned
commercial areas might soon become poor; considering Sweden has the highest amount of retail
per inhabitant in Europe. And the strategies that are prevalent in the American planning
discussion, related to commercial areas, might become increasingly relevant during the next two decades. Suburban retrofitting can surely be a form of sustainable development if the strategy is carried out thoroughly. That is, the redevelopment need to have a clear focus on densification, diversification of functions and connection to public transit. Otherwise there is an evident risk of “cosmetic sustainability” and contra productive results in relation to the aims of suburban retrofitting.
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